

Science, Religion, and Celebrations: A Paradigm for Teaching Holidays

by Kathleen Montgomery
and Gloria Tansits-Wenze

As natural seasonal changes occur each year, people, too, undergo change. Personal thoughts shift from the freedom of summer to those of settling in for the winter, those of celebrations and bonding closer to friends and relatives, and those of inner meaning.

Throughout time, human beings, noting these changes in nature, have created rituals to alleviate a fear of the unknown dark and cold and celebrations to rejoice in the onset of warmer weather and blooming plant life. Around the world, developing civilizations contemplated and celebrated each season in an ongoing attempt to explain the recurrence of the seasons. The resulting proliferation of feasts and celebrations across the cultures exemplify these "reasons for the seasons." Ironically, these two occurrences, seasonal changes and their corresponding celebrations, at times can combine to present a quandary for U.S. schools. This quandary is particularly noticeable when the fall equinox brings the realization that the "holidays" are coming.

As Menendez (1994) noted, several of the holidays traditionally celebrated during the school year have significant religious overtones or foundations. This backdrop is the source of the quandary.

The search for religious freedom brought many of the first European settlers to the shores of the New World, and, for

more than 200 years, the First Amendment has protected religious freedom. At first, students recited "The Lord's Prayer" to begin the school day, and vacationing during Christmas and Easter breaks became commonplace, thus reflecting the traditions of the dominant Anglo-Saxon Protestant culture that initiated and supported early public schools. Society evolved, welcoming immigrants from many different parts of the world; these new populations brought their own worldviews and ways of celebrating seasonal changes.

Immigration to the United States from all parts of the world continues to this day. The U.S. Census for 2000 reveals an already culturally diverse population becoming even more diverse. Reflecting these shifts, contemporary U.S. public schools find increasing cultural variation among students, though the Anglo-Saxon Protestant influence remains dominant in many schools. Modern educators, sensitive to the increasing cultural diversity of the student population in public schools, are taking a hard look at traditional "common practices" in light of the Constitutional separation of church and state. Protestant-centered "holiday" celebrations traditionally practiced in public schools are being challenged.

Since the 1962 U.S. Supreme Court decision regarding prayer in public schools, communities have become divided on the

issue of religion in public schools. People have a right to expect that public schools will not be used to promote religious practices or celebrations. People who have grown up with traditional practices, on the other hand, want the holidays celebrated in schools for their child as was done when they were children. Consequently, when faced with an upcoming holiday, many teachers often either allow their classes to celebrate with secular activities or ignore the holiday altogether. Other teachers struggle with defining how teaching about the holiday fits into their curriculum, what is important to teach about the holiday, and how to teach the holiday from a variety of worldviews. In addition, the integral nature of many holidays and issues of religion makes many teachers feel uneasy about teaching holidays at all. There are, also, many teachers who wrestle with finding a way to address the holidays that would be meaningful for each student and provide a global perspective.

This dilemma surrounding holidays in the public schools is resolvable. There is a

natural connection between science and religion. With some attention to basic legal issues regarding religion in the schools, teachers can address the nature of holidays to students in a meaningful way.

SCIENCE AND RELIGION

From earliest times, people have been curious about the world around them and have acquired important basic knowledge as they studied natural occurrences. Seasonal changes played a dominant role in the formation of early science and religion; indeed, a major scientific advance occurred when people realized that nature furnishes a regular sequence of seasons. For example, the ancient Egyptians and Babylonians studied the motions of heavenly bodies and so learned to predict the changes of seasons and the best times to plant and harvest crops (World Book Inc. 1999). At the same time, feasts and festivals were held to commemorate the time of harvest. Additionally, these feasts or holidays added meaning and hallowed significance to the seasonal passage. In time, these festivals, or "holy days,"

Kathleen Montgomery is Director of Basic Undergraduate Programs and Associate Professor of Education at the University of Scranton in Pennsylvania. Her research interests include innovative teaching practices and assessment methods in elementary schools. Dr. Montgomery is a member of the Sigma Chi Chapter of Kappa Delta Pi.

Gloria Tansits-Wenze is Assistant Professor of Education at the University of Scranton in Pennsylvania and a leader in the early childhood program. Her research interests include multiethnic studies for European-American children. Dr. Tansits-Wenze is a member of the Sigma Chi Chapter of Kappa Delta Pi.

became part of a system of beliefs providing the celebrants with a sense of unity and common meaning. This bonding was held together by a faith known as "religion."

This early sense of connectedness between science and religion continues to impact us in modern times. Some have called for a distinct separation between science and religion (Weinberg 1992). Yet others have held another view. As Albert Einstein (in Dukas and Hoffman 1981, 39) noted, "What I see in Nature is a magnificent structure that we can comprehend only very imperfectly, and that must fill a thinking person with a feeling of humility. This is a genuinely religious feeling that has nothing to do with mysticism." Francisco Ayala (2000), a science professor at the University of California, has argued that it is possible to believe that a personal God created the world while also accepting that the planets, mountains, plants, and animals came about after the initial creation by natural processes. These views suggest that science and religion need not be mutually exclusive concepts.

Religion is rooted in theories based on faith and/or dogma. Generally, these beliefs are unchanging and depend on a personal understanding of one or more god. Science, on the other hand, is rooted in theories based on data gathered from experimentation. Beliefs stem from provable facts; changes in understanding of evidence, therefore, can change beliefs. Both science and religion attempt to explain what has been observed; both try to predict what has not been observed. Furthermore, both strive to explain the origins of the universe and mankind's place in it. Ethical issues are also important to both science and religion. Finally, both pursue mankind's improvement. Science and religion make claims about the same world; they can both conflict and reinforce one another. Perhaps the most important thing to recognize is that

science and religion are each competent to illuminate aspects of the same reality (Nord 1999). The science of the seasons and their corresponding festivals fit this logic rather accurately. The dilemma arises when festivals turn into holidays that are then viewed as "religious."

THE COURTS ON RELIGION IN SCHOOLS

In 1995, then Secretary of Education Richard Riley helped to clarify for schools how to balance expected school holiday celebrations while addressing the extent to which religious expression is permitted. In regard to school celebrations that may have religious overtones, Riley (1995) stated:

Public schools may not provide religious instruction, but they may teach about religion, including the Bible or other scripture: the history or religion, comparative religion, the Bible (or other scripture)-as-literature, and the role of religion in the history of the United States and other countries all are permissible public school subjects.

Similarly, it is permissible to consider religious influences on art, music, literature and social studies.

Although public schools may teach about religious holidays, including their religious aspects, and may celebrate the secular aspects of holidays, schools may not observe holidays as religious events or promote such observance by students.

Thomas (1996) agreed that government neutrality in religion does not mean that schools should ignore religion in the curriculum or censor religious perspectives in the classroom. To the contrary, schools must teach about religion if students are to understand the world in which they live. The U.S. Supreme Court (Menendez 1994) upheld a lower federal court decision that said

recognition of holidays may be constitutional if the purpose is to provide secular instruction about religious traditions rather than to promote the particular religion involved.

With these guidelines, the impact of religious influences appropriately falls in the curricular realm of the public school classroom. The question, therefore, is no longer *may* we teach holidays in today's classrooms but rather *how* should we incorporate the holidays into our curriculum?

A PARADIGM FOR TEACHING HOLIDAYS

The National Science Academy (NSA 1995), in discussing the use of content standards, has stated, "Students should have opportunities to learn science in personal and social perspectives and to learn about the history and nature of science, as well as to learn subject matter, in the school science program." What better way to learn about the causes of the seasons than to integrate the history of holidays with the history of humankind's efforts to make sense of seasonal changes? When dealing with science content alone, the NSA (1995) has declared that, by grades 5–8, more than half of U.S. students will not be able to use the science models with which they have been presented to offer correct explanations for the seasons. Perhaps a more personal approach to studying the seasons will help students develop an understanding of our universe from past to present. Additionally, presenting continuing investigations to explain our universe may help students see that science is not about facts; it is instead an ongoing process of discovery. Also, adding science history and content to the study of holidays will give teachers multiple opportunities to teach about the difficult concept of seasonal changes.

The science content contained in the paradigm involves understanding of the summer and winter solstices and the fall

and spring equinoxes. We have seasons because the Earth leans slightly on its axis; the approximate angle of the tilt is 23 degrees off the perpendicular to the plane of Earth's orbit. This tilt determines how many hours and minutes that each hemisphere receives precious sunlight. During the summer solstice, the northern hemisphere receives more direct sunlight, which heats the earth most efficiently; also, the sun is above the horizon longer than it is during the winter. At the same time, the southern half of the Earth is tilted away from the sun and people are bundled up for winter. During the winter solstice, the sun is above the horizon for its shortest time and the Earth does not receive the heat it does in the other seasons. On the vernal (spring) and autumnal (fall) equinoxes, day and night are the same lengths. Neither hemisphere gets more sunlight than the other.

No one really knows how long ago humans recognized the solstices and the equinoxes, but the festivals and holidays that have evolved from the abundance of summer and the barrenness of winter reflect the celebration of the life-giving properties of the sun. The holidays we discuss are certainly not all the holidays that can be studied in terms of seasonal celebrations. We selected these holidays because they fit into the paradigm and offer a fair representation of multicultural celebrations. Teachers should, of course, conduct research in their own districts on holidays, keeping in mind the cultural environment of their students and the community.

Fall Equinox Celebrations

The fall equinox marks the day when the sun crosses the equator from the Northern to the Southern Hemisphere. At the equator, the sun rises exactly in the east and sets exactly in the west; throughout the world, day and night become the same

length. Before the cold winter sets in, celebrations of the Northern Hemisphere share common themes of harvest, giving, and charity.

In the fall, crops are harvested. Before winter sets in, a fall harvest is vitally important to celebrate the hard farm work of the summer with a bountiful feast of freshly picked crops. The celebrations cited here serve as examples of those found during this season; others with this common theme are celebrated around the world.

Another theme of fall holidays is that of solemnity, repentance, and remembrance of the dead. Fall is when the life of summer slowly dies as the weather gets colder, eventually leading to winter. It is a time when death surrounds us in nature: leaves die and fall from the trees, and other plants and animals die, as well. It is time when we remember our loved ones who passed before us. Each of our featured holidays contains certain aspects of this theme; however, it is at a lesser degree than the celebration of an abundant harvest. Holidays that emphasize this somber theme of atonement and remembering the dead are celebrated in some cultures. These observances include Yom Kippur, Halloween, Dia de los Muertos (Day of the Dead), All Saints' Day, and All Souls' Day.

Chu-Suk (Korea). Chu-Suk is a time of thanksgiving, celebrated for three days in Korea, beginning on 15 August. Korean families gather to give thanks to ancestors for the harvest. On the first day, the food is prepared and traditional clothing is worn. On the second day, the food prepared on the first day is set on a dining table, families gather, and reverence is shown to ancestors who are believed to visit the home at that time. On the third day, family members return to their daily lives feeling emptiness—but with gladness for the time they shared with their families and giving

thanks to their ancestors (To learn more about Chu-Suk, visit <http://web.pdx.edu/~i6my/f97/f97juun2.html>).

Thanksgiving. In North America, families in Canada and the United States celebrate the tradition of Thanksgiving. In Canada, the tradition had its start when the first European settlers brought the custom from Europe. In the United States, the tradition commemorates the Pilgrim's survival of their first year in the New World. The Canadian Thanksgiving is the second Monday in October, whereas the U.S. Thanksgiving is celebrated on the fourth Thursday in November. The focus of the holiday is giving thanks for a bountiful summer crop and fall harvest. Celebrants gather in homes with family and friends to share an abundant meal. Others volunteer to serve meals to those in need (To learn more about Thanksgiving, visit <http://7-12educators.about.com/library/weekly/aa110200a.htm?terms=thanksgiving>).

Sukkot. Sukkot, a Hebrew tradition, is a time of being grateful for the blessings of the earth. In this celebration, a sukkah, or three-sided hut, is flimsily constructed and decorated with greenery and children's art. The sukkah, more than any other Jewish symbol, reminds the people of their agrarian roots and the transience of life. The celebrants share an outdoor meal with family and friends, and the roof of the sukkah is open to nature. These traditions are reminiscent of ancestors who built their sukkah in the field during harvest time to give thanks for the abundance from the earth. The deliberately fragile sukkah reminds celebrants that, just as a strong wind or heavy rains can topple the sukkah, so, too, are life and possessions temporary. Sukkot allows the people to rejoice in their abundance, at the same time reminding them not to abuse the gifts they are given (To learn

more about Sukkot, visit <http://207.168.91.4/vjholidays/sukkot/insight.htm>).

Winter Solstice Celebrations

In late December, the Earth's orbit causes the Northern Hemisphere to tilt away from the sun. Thus, the Winter Solstice creates the longest night of the year. From this moment, the nights become shorter, and the days grow longer. It is the season of Winter: a time of darkness and cold, a time when many creatures are placed into a state of hibernation; it is also a time when people of many cultures in the Northern Hemisphere enjoy celebrations that focus on light, rebirth, joy, and hope.

In U.S. public schools, a particularly critical quandary has arisen. It seems that the holiday celebrations of the Winter Solstice receive the greatest amount of concern from parents and the school community. The holidays of Christmas, Hanukkah, and Kwanzaa present a crucial dilemma due to their religious connotations. Some school districts ban the display of even secular holiday symbols, dismissing their students for a "Winter Break." Other districts allow the display of symbols, and teachers attempt to offer lessons "about" the three religious observances.

The discrepancy here, is that Christmas is a major Christian holiday, while Hanukkah is a minor Jewish festival that in no significant way parallels Christmas (Melendez 1994). Kwanzaa, a combination of several harvest festivals, is celebrated for seven days following Christmas, predominantly by middle-class African-American families (Wilde 1995). Christmas and Hanukkah

date back to Biblical times, whereas Kwanzaa emerged less than three decades ago as a celebration of unity and ethnic identity. Despite the discrepancies, each of these holidays celebrates the ancients' quest for light, rebirth, and a sense of joy and hope for the return of warmth during the Earth's darkest hour.

The holiday celebrations of the Winter Solstice receive the greatest amount of concern from parents and the school community.

Christmas. Christmas is celebrated all over the world. It signifies to Christians the birth of Jesus Christ, upon whose teachings the Christian religion is based. It is a time when Christians decorate their homes, inside and out, with greenery (holly, evergreens, mistletoe) and festive lights. A yule log is

burned, and a Christmas candle is lit. It is a time of family gatherings and joyous celebrations; a time of gift giving and helping less fortunate people in the community. Christians throughout the world embellish the celebration with a variety of customs and traditions reflective of ethnic heritage (To learn more about Christmas, visit <http://www.cvc.org/christmas/index.htm>).

Hanukkah. Hanukkah, also known as the Festival of Lights, is less a religious holiday than a celebration of a particular historical event. Hanukkah honors the restoration, or rebirth, of divine worship in the Jerusalem Temple after it was defiled by King Antiochus IV of Syria in 165 B.C. Since that time, Jewish people throughout the world have celebrated Hanukkah annually on eight consecutive days during the Winter Solstice. At the center of the Hanukkah celebration is a nine-branched menorah with candles. Family and friends gather each evening during the celebration. They

light a new candle on the menorah, recite prayers, eat an abundance of food, exchange gifts, and offer special consideration to charities (To learn more about Hanukkah, visit <http://www.amfi.org/hanukkah.htm>).

Kwanzaa. Kwanzaa is not a religious holiday; however, it can be a very spiritual celebration for participants. It started in the United States in 1966, when Dr. Maulana Ron Karenga developed it as a way for African-American families and communities to unite in the reaffirmation and strengthening of cultural values. Kwanzaa is celebrated for seven days, from 26 December to 1 January. At the center of Kwanzaa is the *kinara*, a candleholder for seven candles. Each night, a candle is lit and one of seven principles is honored. Kwanzaa is a joyous time of renewal with family and friends. Gifts are exchanged, and a culminating feast is held on 31 December, with family and community uniting in a sense of togetherness (To learn more about Kwanzaa, visit <http://www.officialkwanzaawebsite.org>).

Spring Equinox Celebrations

The spring, or vernal, equinox once again brings a day and night of equal length. People celebrate the beginning of longer days and shorter nights; spring becomes the season of rebirth in which nature comes alive. Nature comes out of its cold, restful state in preparation for new beginnings. Living things are awakened, and physical evidence of rebirth is apparent as plants begin to bloom and new life is brought into the world. Common themes among the holidays found in this season involve the idea of rebirth and the symbols of new life; this new potential is often represented by eggs and seeds.

Nawruz (Persia). The Persians call the spring equinox Nawruz, which means New

Day. The Nawruz festival is preceded by a thorough housecleaning and offers a big feasting day. Both the decoration of the table and the sorts of food served have symbolic significance. The theme of the feast is the green of spring, and most dishes feature either vegetables or the color green. Many of the foods prepared for Nawruz contain seeds (especially pistachios, walnuts, and hazelnuts) to celebrate the beginning of nature's renewal. In the 12 days that follow Nawruz, Persians visit their friends and families, share meals, and give gifts. The holiday season ends with a picnic (To learn more about Nawruz, visit <http://www.nawruz.com>).

Easter. Easter is an important Christian holiday that celebrates the rebirth of Jesus Christ; it is the culmination of events during the Christian Holy Week. Easter celebrations also have many symbols associated with the new life promised by the coming of longer days and warm, growing environments. Lambs, chicks, and baby creatures are examples of this theme. The Romans, Gauls, Persians, and Chinese first used the tradition of colored eggs during Easter. Even the Easter bonnet and new clothes show the end of winter and a fresh new beginning. The Easter feast, with families and friends sharing fellowship, is an important part of this holiday (To learn more about Easter, visit www.holidays.net/easter).

May Day. All over the world, May Day is celebrated on 1 May. It is an international holiday that originated in honor of the first spring planting. Since before written records, people have celebrated the return of the sun with special appreciation at this seasonal time right before summer. May Day celebrations almost always involve flowers, spring decorations, and some symbol of good luck and fertility for crops and

humans alike. In France, for example, bunches of flowers are tied around the tails of cows to assure plenty to eat and drink throughout the year. In Germany, boys often secretly plant May trees in front of the windows of their sweethearts (To learn more about May Day, visit <http://www.umkc.edu/imc/mayday.htm>).

Summer Solstice Celebrations

The summer solstice is the time when the daytime hours are at a maximum. Since ancient times, summer has been considered a joyous time of the year. Warm temperatures return, leaves on deciduous trees are full and green, and food is easier to find. Crops have been planted for harvesting in the months ahead. Rejoicing and merry-making over the return of summer are basic components of summer holidays.

Fire rites. Fire rites appear in many celebrations because of earlier peoples' fear that the sun would not come back; after all, the days after the solstice began to get shorter and shorter. Bonfires, therefore, appear during summer celebrations to symbolize the sun's power. Originally, they were intended to help renew the sun's energy as it began its downward course across the horizon; they remain an important part of summer in many cultures (To learn more about fire rites, visit <http://www.ritualhut.com/f~summ.htm>).

Corn dances. The Green Corn Festival, or Ceremony, is a Native American harvest celebration. Creek, Cherokee, Seminole, Yuchi, and Iroquois Indians—as well as other Native American tribes—celebrate differing versions of this ceremony. The ceremony is typically held during a full moon, when the *first* corn crop of the summer is ready to harvest; it is a time of thanks and forgiveness. Tribes celebrate the wealth of food and give thanks to the earth.

Grudges are forgiven, and relationships are renewed. Many foods are included in the feast, with an emphasis on corn: roast corn, corn tortillas, corn soup, and corn bread (To learn more about Corn dances, visit <http://www.web-holidays.com/grcorn>).

Midsummer celebrations. Considered as a group, the summer holidays are a celebration of life, growth, and prosperity for all. There are literally hundreds of midsummer celebrations that range from ancient to modern. They are truly international in scope. In ancient Rome, for example, the midsummer celebration was held to honor the goddess of good fortune; it included dances and outdoor games with flowers decking boats, courtyards, and houses. In Finland, homes are decorated with garlands of wildflowers and greenery. In Estonia, a great bonfire is lit to symbolize the power of the sun. In many places, the celebrations include leaping over fire for good luck and prosperity. Summer celebrations today include bonfires, abundant picnics with family and friends, and many outdoor activities (To learn more about midsummer celebrations, visit <http://dmoz.org/Society/Holidays/Midsummer>).

A NEW BEGINNING

As this wealth of cultural evidence suggests, no longer must teachers be bogged down in the mire of the “holidays,” pondering how to celebrate without violating the rules and rights of religious expression. As we have suggested, teachers and children can observe the seasonal changes that occur naturally each year, *plus* honor the cross-cultural celebrations that accompany each event. It is a time to acknowledge and make connections with our place in the universe, which is both a creative act and a product of the universal forces of nature and our understanding of science. So let the celebrations begin!

REFERENCES

- Ayala, F. J. 2000. Arguing for evolution. *The Science Teacher* 30(1): 37-41.
- Dukas, H., and B. Hoffman, eds. 1981. *Albert Einstein, the human side*. New Jersey: Princeton University Press.
- Gitelman, H. F. 1997. Sharing Hanukkah with young students. *The Social Studies* 88(1): 39-41.
- Haynes, C. C., M. D. Cassity, and M. S. Stone. 1993. *The state of California three Rs project manual: Rights, responsibilities, and respect*. Fairfax, Va.: First Liberty Institute.
- Menendez, A. J. 1994. Christmas in the schools: Can conflicts be avoided? *Phi Delta Kappan* 76(3): 239-42.
- National Science Academy. 1995. *National science education standards*. Washington, D.C.: National Academy Press.
- Nord, W. A. 1999. Science, religion, and education. *Phi Delta Kappan* 81(1): 28-33.
- Riley, R. W. 1995. Secretary's statement on religious expression. Washington, D.C.: U.S. Department of Education. Available at: <http://www.ed.gov/Speeches/08-1995/religion.html>.
- Schaeffer, A. G., and M. B. Bass. 1996. Conflict between law & religion: A peaceful solution for the teaching of December holidays. *Social Education* 60(5): 308-12.
- Stafford, J. 1993. How to teach about religions in the elementary social studies classroom. *The Social Studies Classroom* 84(6): 245-48.
- Thomas, O. S. 1996. Keep the faith: Religion and public education have moved from battleground to common ground--Dare we say 'hallelujah'? *Learning* 25(2): 64-66.
- Thomas, O. S. 1999. Legal leeway on church-state in school. *School Administrator* 56(1): 12-16.
- Weinberg, S. 1992. *Dreams of a final theory: The search for the fundamental laws of nature*. New York: Pantheon Books.
- Wilde, A. D. 1995. Mainstreaming Kwanzaa. *The Public Interest* 119: 68-79.
- World Book Inc. 1999. Science. In *The World Book 1999 multimedia encyclopedia*, ed. WBI. Chicago: WBI.

There is a deep moral influence in these periodical seasons of rejoicing, in which whole communities participate. They bring out, and together, as it were, the best sympathies in our natures.

—SARAH JOSEPHA HALE

U.S. editor and poet, 1788-1879



© Kappa Delta Pi

A vertical yellow bar with a red diamond at the top, located on the left side of the page.

COPYRIGHT INFORMATION

TITLE: Science, religion, and celebrations: a paradigm for
teaching holidays

SOURCE: The Educational Forum 66 no2 Wint 2002

WN: 0234903464010

The magazine publisher is the copyright holder of this article and it is reproduced with permission. Further reproduction of this article in violation of the copyright is prohibited. To contact the publisher:
<http://www.kdp.org/>.

Copyright 1982-2002 The H.W. Wilson Company. All rights reserved.